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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/585,475

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Gudmundur Gunnarsson

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EXAMINER

LE, HOA T

ART UNIT

PAPER NUMBER

1787

NOTIFICATION DATE

DELIVERY MODE

08/31/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/585,475	Applicant(s) GUNNARSSON ET AL.	
	Examiner H. (Holly) T. Le	Art Unit 1787	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 19-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 June 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/7/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of claims 1-18 in the reply filed on June 23, 2010 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Specification

2. The disclosure is objected to because of the references to the claims in the specification. See for example, page 3, line 34 and paragraph bridging pages 3 and 4. The content of a claim usually changes during the prosecution, by amendment or cancellation, which then would render a description referring to a particular claim meaningless. Appropriate correction is required. Note that not all references made to claims in the specification are identified. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the term “preferably” renders the claim indefinite because it is unclear whether the feature(s) following the term “preferably” is part of the claimed invention. See MPEP § 2173.05(d). It is suggested that “optionally” is used if a certain feature is not required by the claims. “mineral impurities” (both coarse and fine), “precipitated silica”, “mother solution” have no proper/clear antecedent basis. It is not described which process step(s) produces these materials. In addition, the term “suitable” in “suitable aluminate” renders the claim indefinite because the claim fails to define what function makes an aluminate a “suitable aluminate”.

Claims 2, 4, 8, suffers the same deficiency of claim 1 regarding the term “preferably”. In claims 9 and 10, “the coarse particles” has no proper antecedent basis. Note that only “coarse mineral impurities” is described in claim 1 upon which claim 9 depends.

Claim 11 is indefinite because the claim contains a broad limitation “aqueous washing liquid” followed by a narrow limitation “typically water”. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by “such as” and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the

Art Unit: 1787

claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

Claim 11, it is unclear what denotes a silica being "suitably pure" as what considered "suitable" is not defined in the claim.

Claim 12 is indefinite because it contains a broad range, 10-30%, followed by a narrow range, 18-22%. For detailed explanation, see claim 11 above.

Claim 13 is indefinite in view of the term "preferably" and "e.g.". for the same reasons set forth in the rejection to claim 1 above.

Claim 14 is indefinite in view of the indefinite terms: "preferably" and "suitable" as set forth above. In addition, "i" (after "pH") should be "is".

Claims 15 and 16 are indefinite in view of the indefinite term "preferably".

Claim 17 is indefinite in view of the term "suitable" for the reason set forth above. Also "step 7" has no antecedent basis.

Claim 18, "the substantially purified slurry" has no clear antecedent basis.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1787

Examiner's Note: For purpose of examination, features following "preferably" are being treated as optional and thus not required in the claims.

6. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,780,005 to Olerud ("Olerud'005) in view of US 4,537,699 to Jas ("Jas'699").*

Olerud'005 teaches a method of making precipitated silica from olivine comprising : (1) providing olivine particles; (2) removing coarse impurities; (3) mixing the refined olivine with concentrated hydrochloric acid to a slurry, and reacting for a period of time; (4) separation of precipitated silica from mother solution; (5) removing impurity grains; and (5) washing and drying the precipitated silica. See Olerud'005, col. 1, line 62 to col. 2, line 12; col. 3, lines 20-54; col. 9, lines 10-53. Olerud'005 teaches the coarse impurities being removed before the acid leaching process in order to save acid used during the leaching (Olerud'005, col. 3, lines 47-53); however, it would have been obvious that the impurity removal step can be done after the acid leaching if consumption of the acid is not a concern. Olerud'005 does not teach using sodium aluminate to lower the viscosity of the silica slurry. Jas'699 teaches that the rheological properties of precipitated silica suspension can be improved by adding sodium aluminate and adjust the pH of the slurry. See Jas'699, claims. Therefore, one of ordinary skill in the art would have been motivated by the teaching of Jas'699 to include the step of lowering viscosity of the slurry prior to drying the precipitated silica.

Claim 2: Adjust the pH of the silica slurry within the claimed range is taught by Jas'699. See Jas'699, claims.

* US 5,780,005 provided by Applicant.

Art Unit: 1787

Claim 3: The particle size of the olivine is in the range of 0.1-0.5mm (Olerud'005, col. 3, lines 42-45).

Claims 4-11: Adjusting the reaction temperature and time to achieve optimal results would have been obvious through experimentations.

Claims 12-18: Concentration of the sodium aluminate in the suspension is suggested by Jas'699. See Jas'699, claims.

7. Other references are cited as art of interest.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. (Holly) T. Le whose telephone number is 571-272-1511. The examiner can normally be reached on 12:30 p.m. to 9:00 p.m. (EST), Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1787

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. (Holly) T. Le/
Primary Examiner, Art Unit 1787

August 25, 2010